

Application No. 10/026,020  
Amendment dated April 4, 2005  
Reply to Final Office Action mailed November 3, 2004

### **REMARKS**

The present Amendment is in response to the Examiner's Final Office Action mailed November 3, 2004. By the foregoing amendments, Claims 29-44 are cancelled, claims 1, 45, and 53 are amended. Claims 1-28 and 45-59 are now pending in view of the above amendments, and are now believed to be in a condition for allowance.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants' understanding and discussion of the references, if any, is consistent with the Examiner's understanding. Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

#### **Rejection Under 35 U.S.C. § 103**

The Examiner rejects claims 1-29 and 45-59 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,359,920 (*Jewell*) in view of U.S. Patent No. 5,841,152 (*Ishikawa*). Claim 1 has been amended to require a compressively strained flattening layer sandwiched between a lower confining layer and the active region. The compressively strained flattening layer also flattens a surface on which the active region is formed.

As discussed in the specification, the flattening layer can flatten out molecular steps that can lead to problems like dislocation in the VCSEL. The flattening layer is not part of the active region, yet it flattens the surface on which the active region is formed. *Jewell*, in contrast, teaches that the quantum wells may incorporate techniques that can include strain compensation. See col. 36, lines 1-8. The strain compensated quantum wells taught by *Jewell*, which are in the active region, do not teach or suggest a compressively strained flattening layer sandwiched between a lower confining layer and the active region. Further, *Jewell* does not teach that the

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strain compensated quantum wells of *Jewell* flatten the surface on which the quantum wells are formed.

*Ishikawa* also teaches strained quantum well layers. See col. 2, lines 24-27. As discussed above, strained quantum well layers do not teach or suggest a compressively strained flattening layer sandwiched between a lower confining layer and the active region. Also, the strained quantum well layers of *Ishikawa* do not flatten the surface on which the quantum wells are formed.

For at least these reasons, claim 1 overcomes the art of record and is believed to be in condition for allowance. Claims 45 and 53 have been similarly amended and are also believed to overcome the art of record for at least the same reasons. The dependent claims, namely claims 2-28, 46-51, and 54-59, depend from claims 1, 45, and 53, respectively, and overcome the art for at least this reason.

#### Conclusion

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 4 day of April, 2005.

Respectfully submitted,



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